

REMARKS

The specification has been amended to correct a grammatical error, and a German to English translation error. The meaning of the paragraph in the Summary now reflects that which is taught in the Detailed Description. As noted on pages 4 and 6-7 of the application, an intimate bond of the polyurethane gel and the polyurethane foam is created during foaming and curing, and, as noted on page 2 of the application at lines 8 and 9, the foam and the gel are joined by implicit adhesive properties. No new matter is added.

To simplify prosecution, all prior claims have been canceled, and new claims 70- 80 have been added. The new claims are drawn to the subject matter elected during prosecution (a “molding”—this molding now being specifically limited to a “seat cushion”), and the applicant maintains the right to pursue non-elected claims in a divisional application.

Claim 70 requires, as a recited element, a bond between said polyurethane gel and said polyurethane foam, and that the bond is formed only from said at least one polyurethane gel and said at least one polyurethane foam. This is discussed on pages 2, 4, 6, and 7 of the application. The seat has spring and damping properties in the load direction provided respectively by the polyurethane foam and the polyurethane gel, and provides for a good bond between the two layers which are chemically similar (i.e., both polyurethanes) but physically different (i.e., foam versus gel). The seat cushion avoids having an intervening layer of a different material therebetween which may result in introducing stress or strain in the molding due to differences in the intrinsic properties of a separate bonding material. The recited elements are preferably used as all or a part of a seat cushion (e.g., for chairs, sofas, car seats, gym equipment, bicycles, etc.) whereby the seat cushion would have the comfort of a foam seat, but would also have the damping capability of the gel, and would avoid the drawbacks in weight and thermal capacity attributed to “all gel” seating. Furthermore, the seat cushion would have a good chemical and physical bond between the chemically similar, but physically different layers.

Dependent claims 71-80 are drawn to subject matter similar to that originally presented in claims 2-13. Features of each of the claims is described at

various locations in the patent specification.

Claim 70 eliminates “process oriented” language and positively recites specific elements which would be understood by those of skill in the art. Polyurethane materials (foams and gels) are well known products, and this invention is not limited to any particular type of polyurethane material or constituents thereof. Rather, the present invention requires two physically different entities (e.g., a foam and a gel), and that a bond be present which is formed only from said at least one polyurethane gel and said at least one polyurethane foam. Claim 70 requires that the at least one polyurethane gel function as a damping element and that the at least one polyurethane foam function as a spring element. Support for these features is found on page 3, at lines 17. Claim 70 requires that the at least one polyurethane gel is a different composition from the at least one polyurethane foam. Support for this feature is found on page 4, lines 13-14.

In the office action of September 20, 2005, certain claims were rejected as being anticipated by U.S. Patent 5,844,013 to Kenndoff. None of the present claims would be anticipated by Kenndoff.

At the outset, it is recognized that Kenndoff does not teach a seat cushion design or anything related to a seat cushion. Rather, Kenndoff is related to a foam used in deep wounds for medical applications. To highlight this distinction, the claims of the present application now specify unequivocally that a seat cushion is being claimed. Given that there are well recognized differences between a seat cushion and a wound dressing, the claims cannot be anticipated by Kenndoff. Further, these well recognized differences would also establish that one skilled in the art of manufacturing seat cushions would not look to the wound dressing art for addressing problems unique to seat cushions (e.g., wanting to obtain damping effects, as well as spring effects—both of which are tactile as opposed to a wound dressing which fits inside a wound). Finally, claim 70 now recites spring and damping features (which are features desired in a seat cushion but which are not required or may not even be desired in a wound dressing) and that the polyurethane gel and the polyurethane foam are different compositions (this not being shown in Kenndoff).

With reference to the office actions dated January 28, 2005 and September

20, 2005, Kenndoff teaches only “one” material which he characterizes as a “polyurethane gel foam” or a “polyurethane foam...made from a polyurethane gel”, etc. All examples in Kenndoff describe the synthesis of polyurethane gels and the use of “an essentially non-aqueous foaming agent”. In sharp contrast, the present invention requires both a polyurethane gel and a polyurethane form (two materials), and further, requires a bond between the gel and the foam. At no point does Kenndoff discuss having different physical layers (foam and gel) adhered to one another. Previously, column 4, line 38; column 6, line 39; column 10; and column 17, line 67 to column 18, line 4 of Kenndoff have been addressed by the Examiner. It is noted that Kenndoff describes a self adhesive polyurethane gel foam which has the property that it completely loses adhesive properties in the milieu of the wound, but has strong adhesive properties to different skin types (see particularly column 17, lines 32-40. Column 17, line 67, identifies the possible use of polyurethane sheets as the backing material and column 4, line 39 identifies polyurethane film as a backing material. The Examiner’s attention is directed to column 10, lines 11-24 of Kenndoff where the baking materials per se are discussed, and it is noted that this passage identifies “foam sheets” among the possible alternative baking materials. Thus, while Kenndoff may include a polyurethane foam which selectively attaches to skin and selectively does not attach to wounds adhered to another polyurethane film or sheet, Kenndoff makes no mention of, and would not suggest to one of ordinary skill in the art that the polyurethane film or sheet is a polyurethane gel that is a different composition from the polyurethane foam. Quite the contrary, Column 10, line 17 would suggest to one of ordinary skill in the art that Kenndoff contemplates a polyurethane foam sheet on which is positioned the unique polyurethane foam which selectively sticks to skin but not to the wound (i.e., they are both foam compositions). Further, one of ordinary skill in the art would recognize that a “gel” has properties that are between that of a liquid and a solid, and that such a material could not be used as an effective backing material because of its liquid/solid properties (e.g., it would not provide any stiffness required of a backing material). Finally, claim 70 as amended requires a bond between said at least one polyurethane gel and said at least one polyurethane foam which is formed only from said at least one polyurethane gel and said at least one

polyurethane foam. At no point does Kenndoff show or suggest this attribute. Moreover if a metal backing were used (see column 10, line 15), there would be no bond between the backing material and the polyurethane foam; rather, one would need to either use an adhesive layer (which is expressly avoided in the present application) or rely solely on the self adhesive property of the polyurethane foam to the metal. Since Kenndoff provides no information with respect to bonding between the backing and the polyurethane foam with the selective self adhesive to skin and not adhesive to wound property, it cannot be properly concluded that there is a bond formed only between the backing material and the foam. Further, as discussed in detail above, a “gel” would not function as a “backing material”; thus, Kenndoff does not show or suggest a bond formed between a polyurethane gel and a polyurethane foam only from the polyurethane gel and the polyurethane foam. Thus, contrary to the statements in the office action, the materials recited in the claims dramatically differ from the materials of Kenndoff and are thus different even outside of the well recognized differences in application (seat cushion versus wound dressing). Hence, Kenndoff does not anticipate or make obvious the claimed invention.

In the office action of September 20, 2005, certain claims were rejected as being obvious over a combination of AU199929072 B2 in view of U.S. Patent 4,456,642 to Burgdorfer. It should be recognized that AU199929072 corresponds to U.S. Patent 6,336,681 to Crosbie. None of the claims of the pending application are obvious over any combination of Crosbie and Burgdorfer.

With reference to Crosbie, it is recognized that the focus of the patent is on the mechanical relationship of a forward and a rearward supporting cushion which are used in a chair. The rear supporting cushion is required to have a high resistance to deformation while the forward supporting cushion has a low resistance to deformation. With reference to the “Summary” section of Crosbie, it can be seen that in most applications, Crosbie contemplates having two different “foam” materials. In the one application where the use of a “gel” is discussed (such as in the Abstract, but also in the Summary), Crosbie indicates that the gel material is “contained within a suitable protective layer”. When discussing the formation of a bond between the front and rear supporting cushions, Crosbie indicates that these portions of the seat cushion are affixed by “a suitable

adhesive”.

Thus, the Examiner’s conclusion that AU 199929072 differs from the applicant’s claim in that it does specify the make up of its gel layer, is simply incorrect, and is incorrect with respect to the claims as presently set forth. In particular, at no point does AU 199929072 show or suggest having a polyurethane foam and a polyurethane gel joined together by a bond formed only from the polyurethane foam and the polyurethane gel. Quite contrary, AU 199929072 (Crosbie) contemplates the use of an adhesive to join two different foam materials, or, when a gel is used, encasing the gel in a protective layer. Viewing Crosbie, one of ordinary skill in the art is given no guidance on the use of two chemically similar but physically different materials in a seat cushion, where a bond is formed only from the materials used in the chemically similar but physically different materials.

The Examiner has relied on Burgdorfer for its teaching with respect to polyols. However, it is noted that Burgdorfer describes gel pads. Burgdorfer does not describe a pad or other molding composed of both a polyurethane gel and a polyurethane foam (as is the case in the present invention).

If Burgdorfer were combined with AU 199929072 (Crosbie), all that would result is a seat cushion similar to that described in the Summary of Crosbie, where a gel is positioned within a cover and serves as a forward or rearward portion of a seat cushion. No combination of Burgdorfer and Crosbie would suggest to one of ordinary skill in the art, a bond formed only from said at least one polyurethane gel and said at least one polyurethane foam, as is required in claim 70. Quite the contrary, the combination proposed by the Examiner would suggest to one of ordinary skill in the art a separate encased gel, and, if joined to a foam material, the use of an adhesive to join the cover of the gel to the foam.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 70-80 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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